



## White Paper 2025-07

### How to Operate Hardware Manufacturing and Industrial Project Delivery within the same Contractor Organisation

*Several large contractor organisations combine hardware (equipment) manufacturing and industrial project delivery within the same organisation. This is an increasing trend as owners expect more integrated service offers, leading to such combinations. However, there is a definite intrinsic tension between the two types of activity which follow different economic drivers and cultures, and it is not easy to combine those activities harmoniously. In this White Paper we investigate the reasons for this tension and possible approaches to build effective value from this situation.*

*This White Paper follows on a previous White Paper [2025-06 How Owners can Decide Whether to Integrate Key Equipment Manufacturing and Facility Delivery in a single Contract](#).*

#### The conflicting drivers of hardware equipment manufacturing and industrial project delivery

The following observations appear to be valid across industries, from our experience in the energy, transportation and infrastructure sectors.

Hardware equipment manufacturing will focus on the following value creation drivers:

- continuous and steady manufacturing plant utilisation,
- lean approaches minimising variation,
- global supply chain development and optimisation, linked to a particular target production capacity,
- design of equipment to optimise manufacturing,
- standardisation of equipment to reap as much series effect as possible and diminish production lead time.
- Minimise production line set up time and therefore the number of times there is a change between equipment requiring different set up

Industrial project delivery will focus on the following value creation drivers:

- delivery of equipment and subcomponents to suit key convergence points and dependent activities in the project delivery schedule, often anticipating early delivery of key equipment to reduce schedule risk and build the facility around it,
- lean is not a key practice because of the one-off situation of each project, of the need to respond to interfaces and operational events, even if change is minimised as much as possible,
- local content requirements may require specific parts of supply-chain, manufacturing and project delivery to be carried out in-country, outside normal manufacturing plants,
- design of equipment to optimise or allow installation (e.g. limit weight and size for transportation and lifting, geometrical constraints such as dimensions of existing openings...)

**While the difference in value drivers between manufacturing and project delivery makes differences in approaches irreducible, tension is unavoidable – it needs to be positive not destructive**

- adaptation of the solution to the actual conditions of the project, including customisation of equipment.

These value creation drivers are quite conflicting on a number of aspects. In our experience, the most significant conflicts arise from different drivers for design - standardisation vs customisation - and equipment delivery schedule - manufacturing optimisation vs overall project delivery duration and risk.

In this White Paper, we place ourselves in the situation where both activities are conducted within the same contractor organisation, generally in different Business Units. Business Units are always separate because of the different drivers, commercial and operational approaches and locations of main activities, which warrant specialised organisations for manufacturing and project delivery.

#### How to overcome the opposite value drivers of manufacturing and project delivery

Even within an integrated contractor organisation (or a joint venture) covering both manufacturing and project delivery, tensions between those two poles will continue to exist, and are to some extent irreducible because of the distinct value drivers and different business unit organisation and management.

One of the first essential aspects is to ensure the install ability of the equipment in the project delivery context, which may significantly influence design, and may impede standardisation. This issue needs to be out of the way early, with a joint effort of both equipment design and installation engineering.

Because of the different drivers of both business models, the best solution for the company is always a compromise between the maximum efficiencies of manufacturing and project delivery, where the sum of the downside of the following four aspects needs to be minimised:

- rescheduling of manufacturing production and sequence, leading to shopfloor inefficiencies and impact on the rest of the production,
- additional cost of exceptional accelerated logistics arrangement (typically airfreight),
- direct and indirect impact of equipment delivery delay compared to project schedule expectations (e.g. standby of installation cranes, resequencing of construction to allow slotting in the equipment later...),
- optimisation of the facility design to be built in term of lay-out, material quantities, earlier delivery etc based on the level of standardisation of equipment.

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The only way to find out what is the optimal solution for a specific situation is to enable a collaborative, transparent discussion based on shared data with the aim to minimise the overall impact of the company. Because this typically involves personnel from different business units that are accountable for their bottom line, a very strong governance organisation needs to force this exercise, with the optimised downside being shared fairly between the business units. Ideally this collaboration needs to start very early once client need is known, so as to optimise the overall sequence of equipment specification definition which needs to be achieved earlier than for the rest of the facility; ideally this should be supported by the client asking for an integrated solution early.


In our experience, and depending on the contractor culture and how well people know each other between the manufacturing and project sides, this may require substantial executive level involvement to avoid decisions imposed by one business unit that would be significantly detrimental to the business as whole. It also requires full transparency by both business units on upsides and downsides, which is sometimes contradictory with business culture, and needs to be forced by governance.

### Summary

While the difference in value drivers between manufacturing and project delivery makes differences in approaches irreducible, strong governance and executive involvement must design an approach that aims to minimise the downside for the organisation of alterations to the optimal plans for each side. This requires mutual understanding and collaboration between Business Units, and this governance setup needs to be organised in the long term. Tension is unavoidable – it needs to be positive not destructive!

**Read the Industrial Projects Practical Owner Guide**

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